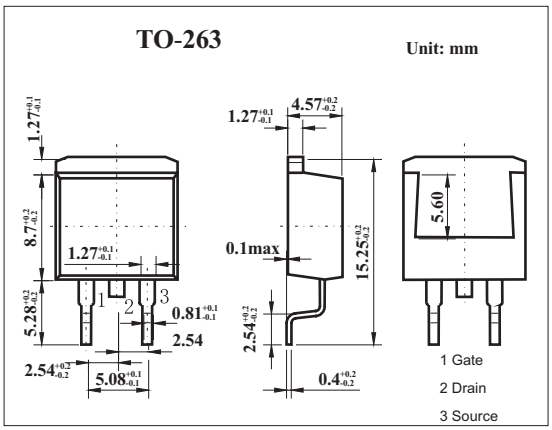
MOS Field Effect Transistor
2SK3740



■ Features

- Gate voltage rating: ±30 V
- Low on-state resistance

  $R_{DS(on)}$ = 160 mΩ MAX. (V_{GS} = 10 V, I_D = 10 A)
- Low gate charge

  Q_G = 47 nC TYP. (V_{DD} = 200 V, V_{GS} = 10 V, I_D = 20 A)
- Surface mount package available

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	250	V
Gate to source voltage	V_{GSS}	±30	V
Drain current	I_D	±20	A
	I_{dp} *	±60	A
Power dissipation T_A=25℃ T_C=25℃	P_D	1.5 100	W
Channel temperature	T_{ch}	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* PW≤10μs,Duty Cycle≤1%

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain cut-off current	I_{DSS}	V_{DS}=250V,V_{GS}=0			10	μA
Gate leakage current	I_{GSS}	V_{GS}=±30V,V_{DS}=0			±10	μA
Gate cut off voltage	$V_{GS(off)}$	V_{DS}=10V,I_D=1mA	2.5	3.5	4.5	V
Forward transfer admittance	$\|Y_{fs}\|$	V_{DS}=10V,I_D=10A	7.0	15		S
Drain to source on-state resistance	$R_{DS(on)}$	V_{GS}=10V,I_D=10A		0.12	0.16	Ω
Input capacitance	C_{iss}	V_{DS}=10V,V_{GS}=0,f=1MHZ		1720		pF
Output capacitance	C_{oss}			330		pF
Reverse transfer capacitance	C_{rss}			170		pF
Turn-on delay time	t_{on}	I_D=10A,$V_{GS(on)}$=10V,R_G=0Ω,V_{DD}=125V		17		ns
Rise time	t_r			17		ns
Turn-off delay time	t_{off}			49		ns
Fall time	t_f			9		ns
Total Gate Charge	Q_G	V_{DD} = 200V V_{GS} = 10 V I_D =20A		47		nC
Gate to Source Charge	Q_{GS}			7		nC
Gate to Drain Charge	Q_{GD}			25		nC